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by Sharanjit Uppal and Sébastien LaRochelle-Côté

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Changes in debt and assets of Canadian families, 1999 to 2012

by Sharanjit Uppal and Sébastien LaRochelle-Côté

Overview of the study

This paper examines changes in debt, assets and net worth among Canadian families with debt over the period 1999 to 2012, by selected family characteristics. It also examines the extent to which two key ratios of indebtedness, the debt-to-income ratio and the debt-to-asset ratio, varied over the period.

- In 2012, the percentage of Canadian families with debt was 71%, up from 67% in 1999. The median debt held by these families was $60,100, up from $36,700 in 1999 (in 2012 constant dollars).
- Between 1999 and 2012, median debt and median assets increased for most types of families, but not equally for all categories of families. Median debt, for instance, increased faster among those in the 35-to-44 age group, among couples with children under 18, and among mortgagees.
- Between 1999 and 2012, the median debt-to-income ratio rose from 0.78 to 1.10, while the median debt-to-asset ratio remained stable, at around 0.25. Families in the 35-to-44 age group witnessed significant increases in both their debt-to-income and debt-to-asset ratios.
- In 2012, 35% of Canadian families had a debt-to-income ratio above 2.0—meaning that their debt was at least twice the level of their annual after-tax income. This compared with 23% of Canadian families in 1999.
- In 2012, 14% of families had consumer debt (i.e., debt other than mortgage debt) that was larger than their annual after-tax family income. In comparison, 8% were facing the same situation in 1999.

Introduction

In the social sciences literature, income is often portrayed as a key measure of economic and social well-being. Yet other measures of economic well-being are equally important, for instance wealth, which can be defined as the present value of total assets of the family minus the sum of all debts held by that same family. Assets are typically made up of real estate, personal belongings and savings, and financial investments, but may also include the present value of employer pension plans. Debt includes mortgage debt and consumer debt (such as student and other loans, personal and home equity lines of credit, unpaid bills, and credit card balances).

Debt is a central feature of household finances, in good part because it plays a fundamental role in maintaining consumption levels relatively constant over the life cycle.[1] In the early stages of the life cycle, saving and borrowing can be used for education and the acquisition of housing. Later, debt is repaid as income rises relative to consumption, thus leading to an accumulation of wealth. In the latter stages of the life cycle, wealth can provide a form of financial security in retirement, particularly in the absence of adequate pension plan coverage.[2]

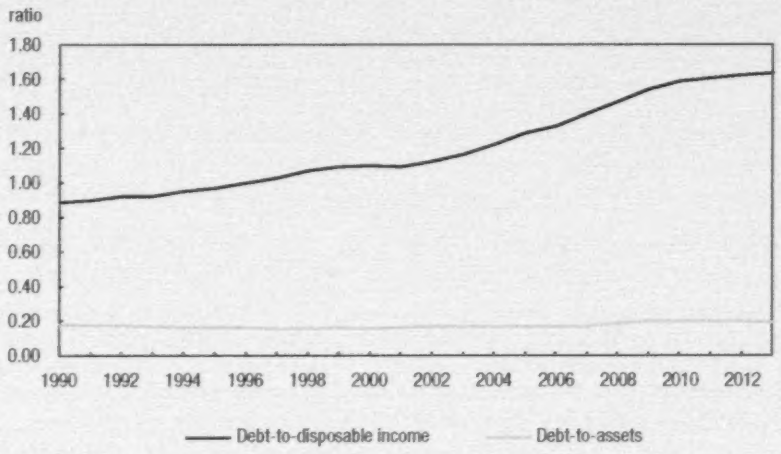
The process of wealth accumulation, however, has changed over time. The past 15 years have been characterized by falling interest rates, rising housing prices, variations in the performance of financial markets, and changes in economic conditions.[3] As a result of these changes, both assets and debts have taken on increasing importance in family finances—at least in relation to income. In 2013, the aggregate ratio of household debt to disposable income was 1.63 (or $1.63 of debt for every dollar of disposable income), compared with

a ratio of 0.89 in 1990. Over the same period, the ratio of household debt to household assets varied little, hovering around 0.2 or below (Chart 1).[4]

Changes in debt and assets, however, may not have been the same for all types of families. In a previous study based on 2009 debt data,[5] debt levels were found to be typically higher among mortgagees, university-educated individuals, couples with children, people living in Alberta and British Columbia, and people with higher family incomes. Little is known about changes in asset and debt accumulation across various characteristics of families since 2005, the date of the last complete survey on household debt and assets conducted by Statistics Canada. Using newly available data from the 2012 Survey of Financial Security (SFS) and data from the 1999 cycle of the same survey, this study fills the gap by examining changes in both debt and asset levels of Canadian families during the period from 1999 to 2012 (see *Data sources, methods and definitions*).[6] All numbers in this article are expressed in 2012 dollars using the Consumer Price Index (All Items) as a deflator.

In this paper, indicators of debt and assets are examined over the 1999 to 2012 period across key family characteristics—including age, education, family structure, region, homeownership status, and family income. This paper also examines how two key indicators of indebtedness varied over the period across family characteristics: the debt-to-income ratio (total amount of debt divided by after-tax income) and the debt-to-asset ratio (total debt divided by total assets).

Chart 1
Household debt as a proportion of assets and disposable income, 1990 to 2013



Source: Statistics Canada, CANSIM table 378–0123, 1990 to 2013.

The percentage of families with debt increased among all types of families

What is the proportion of indebted families (the percentage of 'borrowers') in Canada? In 2012, the percentage of Canadian families with debt was 71%, up from 67% in 1999 (Table 1). Several characteristics were associated with higher proportions of borrowers.[7]

In both 1999 and 2012, the highest proportions of families with debt were found among younger families; families whose major income earner was university-educated; couples with children[8]; and families in the top income quintile. Conversely, those with the lowest proportions of debt were families whose major income earner was aged 65 and over; families whose major income earner had less than a high school education; and families in the bottom income quintile.[9]

Such results are in line with the life-cycle theory of consumption since young people and families with children living at home are generally expected to hold debt to finance their consumption (for example, the purchase of a home).[10] Older individuals, by contrast, are more likely to own their properties outright and thus likely to have less debt remaining on their balance sheet.

The overall percentage of borrowers increased for almost all categories of families between 1999 and 2012, but rose faster in some cases. This was the situation among families in the 65-and-over age group (from 27% to 43%); recent immigrants (from 63% to 76%); families in the second income quintile (from 57% to 66%); and owners without a mortgage (from 43% to 51%). The increase among older families suggests that a rising portion of near-retirees still carry debt as they are about to enter retirement.[11]

Median debt rose faster among middle-aged families and couples with children

In 2012, the median amount of debt held by Canadian families (expressed in 2012 constant dollars) was $60,100, up from $36,700 in 1999 (Table 2). The median level of assets held by families with debt also rose, from $225,400 to $405,200.[12] These numbers, however, varied across family and personal characteristics.

Differences in levels of debt and assets across family categories reflected the life-cycle hypothesis. For instance, middle-aged families (whose major income earner was aged 35 to 44) had a higher median debt in 2012 ($142,600) as did couple families with children ($170,000) and home owners with a mortgage ($180,000). Conversely, median asset values were higher among families in the 55-to-64 age group ($656,800), and among home owners without a mortgage ($846,500). Such results are expected since younger families are in the early stages of their life cycle, and thus have higher levels of debt in relationship to assets. Older families, in contrast, typically have lower debt and higher assets.

Other family categories were associated with higher levels of both debt and assets. These families included those whose major income earner was a university graduate, families in the group of immigrants who have been in Canada for more than 10 years, families residing in Alberta and British Columbia, and families in the top income quintile.

Changes in debt and assets over the period also varied across family categories. Between 1999 and 2012, median debt rose among all age groups, but particularly among families in the 35-to-44 age group (by $79,600). Couples with children also faced a comparatively large increase in their median debt ($87,400), as did mortgagees ($75,000).

Other family categories with significant increases in median debt included couples without children and single people; families with higher levels of educational attainment; immigrant families that have been in Canada for at least 10 years; and families that were in the top three quintiles of family income. Regionally, median debt increased by $64,600 in Alberta, the largest increase of all regions. Other significant increases took place in Manitoba and Saskatchewan, Ontario, and in the Atlantic region.

Table 1
Percentage of families with debt, 1999 and 2012

	1999	2012
	percentage	
Families with debt	**67.3**	**71.1**
Age of major income earner		
15 to 34	79.6	78.6
35 to 44	80.0	84.7
45 to 54	76.4	80.7
55 to 64	60.9	70.3
65 and over	27.4	42.5
Education of major income earner		
Less than high school	51.1	51.2
High school	69.9	70.1
College/trades	75.1	78.0
University degree	75.1	76.3
Family structure		
Non-seniors (under age 65)		
Singles	64.4	65.6
Couples without children or with children 18 and over	77.9	82.5
Couples with children under 18	87.2	90.4
Lone parents	71.7	79.6
Others	73.6	77.9
Seniors (65 and over)	27.4	42.5
Immigrant status of major income earner		
Immigrated within the last 10 years	63.0	76.0
More than 10 years since immigration	62.9	66.3
Canadian-born	68.3	71.8
Region		
Atlantic	73.4	76.4
Quebec	64.3	71.3
Ontario	67.2	70.7
Manitoba and Saskatchewan	63.5	68.9
Alberta	71.6	73.1
British Columbia	68.3	68.8
Homeownership status		
Owners with a mortgage	100.0	100.0
Owners without a mortgage	42.5	51.3
Non-owners	58.3	60.3
Income quintile		
Bottom quintile	54.0	54.6
Second quintile	56.5	65.6
Middle quintile	70.6	76.1
Fourth quintile	77.4	78.8
Top quintile	77.8	80.7

Source: Statistics Canada, Survey of Financial Security, 1999 and 2012.

Table 2
Median debt and assets, families with debt, 1999 and 2012

	Median debt		Change	Median assets		Change
	1999	2012	1999 to 2012	1999	2012	1999 to 2012
	2012 dollars					
All	**36,700**	**60,100**	**23,400***	**225,400**	**405,200**	**179,800***
Age of major income earner						
15 to 34	24,400	39,300	14,900*	63,600	92,700	29,100
35 to 44	63,000	142,600	79,600*	234,000	413,800	179,800*
45 to 54	50,500	87,800	37,300*	355,400	552,700	197,300*
55 to 64	26,200	49,300	23,100*	404,100	656,800	252,700*
65 and over	8,500	18,000	9,500*	310,100	484,300	174,200*
Education of major income earner						
Less than high school	15,100	19,000	3,900	150,600	208,100	57,500
High school	36,400	42,500	6,100	206,000	346,100	140,100*
College/trades	43,000	75,000	32,000*	221,900	388,100	166,200*
University degree	61,600	109,000	47,400*	351,200	621,700	270,500*
Family structure						
Non-seniors (under age 65)						
Singles	12,100	19,700	7,600*	42,200	58,200	16,000
Couples without children or with children 18 and over	48,500	91,000	42,500*	325,100	578,300	253,200*
Couples with children under 18	82,600	170,000	87,400*	283,600	528,700	245,100*
Lone parents	19,300	22,300	3,000	65,000	89,500	24,500
Others	26,200	43,000	16,800	225,500	401,200	175,700*
Seniors (65 and over)	8,500	18,000	9,500*	310,100	484,300	174,200*
Immigrant status of major income earner						
Immigrated within the last 10 years	34,100	58,000	23,900	122,000	274,000	152,000
More than 10 years since immigration	53,900	88,500	34,600*	335,900	559,900	224,000*
Canadian-born	34,500	56,000	21,500*	215,100	388,600	173,500*
Region						
Atlantic	23,900	39,000	15,100*	163,900	284,600	120,700*
Quebec	27,500	34,300	6,800	176,600	334,000	157,400*
Ontario	48,200	72,000	23,800*	271,600	449,000	177,400*
Manitoba and Saskatchewan	31,500	61,000	29,500*	198,000	369,700	171,700*
Alberta	52,400	117,000	64,600*	242,100	460,600	218,500*
British Columbia	45,900	72,300	26,400	274,600	531,400	256,800*
Homeownership status						
Owners with a mortgage	105,000	180,000	75,000*	319,400	547,800	228,400*
Owners without a mortgage	13,100	24,300	11,200*	462,200	846,500	384,300*
Non-owners	7,900	10,000	2,100*	22,800	23,400	600
Income quintile						
Bottom quintile	9,100	12,000	2,900	19,800	24,800	5,000
Second quintile	23,700	31,900	8,200	141,300	241,700	100,400*
Middle quintile	44,300	84,000	39,700*	228,200	406,000	177,800*
Fourth quintile	62,300	105,000	42,700*	307,000	562,100	255,100*
Top quintile	90,400	158,500	68,100*	492,400	1,023,900	531,500*

* indicates that the 2012 value was significantly different from the 1999 value at the 5% level of significance
Source: Statistics Canada, Survey of Financial Security, 1999 and 2012.

In general, significant increases in debt were accompanied by significant increases in median assets over the period. Among Alberta residents, for instance, median assets increased by $218,500 over the period. Similarly, median assets increased by $179,800 among those in the 35-to-44 age group, by $245,100 among couples with children, and by $228,400 among mortgagees.

For some categories of families, median assets increased somewhat faster than median debt did. This was the case among families in the older age groups (55 and over), and home owners without a mortgage—with the latter gaining $384,300 in median assets against a relatively small (but statistically significant) $11,200 increase in median debt. Families whose major income earner was a high school graduate, families with "other" family structures[13], families living in Quebec and in British Columbia, and families in the second income quintile also saw increases in their median assets that were not matched by statistically significant increases in their median debt levels.

Other family types, however, were characterized by significant increases in median debt, but did not benefit from significant increases in median assets. This was the case among non-owners, singles, and families in the 15-to-34 age group.

Changes in median wealth across family characteristics

The results above raise the question as to which families had the largest increase in wealth, or net worth, over the period. In this paper, net worth is defined as the overall value of assets (including employer pensions) held by a family, minus the overall value of debt held by that same family. In 2012, for instance, the median net worth of all Canadian families with debt was $248,000, up from $131,100 in 1999 (Table 3). As was the case with debt and assets, however, changes in median net worth also varied across family categories.

Most categories of families saw significant increases in their net worth between 1999 and 2012. The largest increases took place among top income quintile families ($472,700); home owners without a mortgage ($357,400); families

Table 3
Median net worth, families with debt, 1999 and 2012

	1999	2012	Change, 1999 to 2012	
	2012 constant dollars		dollars	percentage
All	**131,100**	**248,000**	**116,900***	**89.2**
Age of major income earner				
15 to 34	34,100	42,200	8,100	23.8
35 to 44	141,500	218,000	76,500*	54.1
45 to 54	253,100	402,600	149,500*	59.1
55 to 64	349,100	539,400	190,300*	54.5
65 and over	283,400	447,400	164,000*	57.9
Education of major income earner				
Less than high school	95,600	114,600	19,000	19.9
High school	118,200	190,000	71,800*	60.7
College/trades	124,700	220,000	95,300*	76.4
University degree	231,600	430,100	198,500*	85.7
Family structure				
Non-seniors (under age 65)				
Singles	26,000	36,500	10,500	40.4
Couples without children or with children 18 and over	223,600	408,600	185,000*	82.7
Couples with children under 18	165,800	303,000	137,200*	82.8
Lone parents	30,700	47,300	16,600	54.1
Others	171,800	304,500	132,700*	77.2
Seniors (65 and over)	283,400	447,400	164,000*	57.9
Immigrant status of major income earner				
Immigrated within the last 10 years	47,300	74,400	27,100	57.3
More than 10 years since immigration	216,400	346,300	129,900*	60.0
Canadian-born	125,400	240,900	115,500*	92.1
Region				
Atlantic	113,000	179,500	66,500*	58.8
Quebec	104,200	217,600	113,400*	108.8
Ontario	155,100	272,900	117,800*	76.0
Manitoba and Saskatchewan	135,900	240,200	104,300*	76.7
Alberta	142,000	260,000	118,000*	83.1
British Columbia	144,000	316,900	172,900*	120.1
Homeownership status				
Owners with a mortgage	190,900	331,900	141,000*	73.9
Owners without a mortgage	427,400	784,800	357,400*	83.6
Non-owners	12,300	10,100	-2,200	-17.9
Income quintile				
Bottom quintile	11,300	13,500	2,200	19.5
Second quintile	81,500	126,200	44,700*	54.8
Middle quintile	137,700	234,800	97,100*	70.5
Fourth quintile	196,600	419,900	223,300*	113.6
Top quintile	366,300	839,000	472,700*	129.0

* indicates that the 2012 value was significantly different from the 1999 value at the 5% level of significance
Source: Statistics Canada, Survey of Financial Security, 1999 and 2012.

whose major income earner had a university degree ($198,500); families in the 55-to-64 age group ($190,300); and couples without children ($185,000). Such results are not surprising since these categories of families experienced relatively large gains in their median assets, with comparatively smaller increases in their median debt levels.

Conversely, net worth did not increase significantly among families in the 15-to-34 age group, families in the less than high school education group, singles, lone-parent families, recent immigrants, non-owners, and families in the bottom income quintile. In the case of younger families, singles and non-owners, net worth did not increase because median assets did not grow proportionately with the increase in their debt levels. In the case of families in the less than high school group, lone parents, recent immigrants, and bottom quintile families, neither median debt nor median assets increased significantly over the period.

These results suggest that real estate assets played a key role in the overall increase in the value of assets over the period (see *Decomposition of changes in debt and assets across family characteristics* for additional information).

Changes in debt-to-income ratio and debt-to-asset ratio

The debt-to-asset and debt-to-income ratios provide another, but no less important, perspective on household finances.[14] The debt-to-income ratio is considered to be one of the most important indicators of a family's indebtedness. Families with a relatively high debt-to-income ratio are more likely to spend a higher proportion of their income on repaying their debt, leaving less for other consumption (or saving). Another important indicator is the debt-to-asset ratio, which reveals the potential vulnerability of families to changes in asset values—particularly housing.

In this paper, the median ratio for each family category is used. It is obtained by calculating the debt-to-income and debt-to-assets ratios for each family belonging to a particular category, and by identifying the value for the median family within the category. This method has the advantage of being more representative of the financial situation of 'typical' families within the category. On the other hand, such values cannot be compared to aggregate values of household debt and disposable income that are provided by the System of National Accounts.[15] In the accounts, the overall value of household debt is divided by the overall value of income (for the debt-to-income ratio) or assets (for the debt-to-asset ratio). While this method could also be used to generate estimates of the debt-to-income and debt-to-asset ratio for each category, they would not necessarily be representative of typical families within each category.[16] The aggregate ratios by family category are available in a supplementary table (see Table A.2).

Between 1999 and 2012, the median debt-to-income ratio increased significantly, from 0.78 to 1.10. This means that the median family, in 2012, had a debt corresponding to 110% of the family income (up from 78% in 1999). However, the median debt-to-asset ratio changed little, amounting to 0.27 in 1999 and 0.25 in 2012 (Table 4) —thereby suggesting that the median family had a debt level corresponding to roughly one quarter of assets in both years.[17]

The debt-to-income ratio reaches a peak among families in the 35-to-44 age group, then declines with age. This is expected, as levels of debt are lower for older age groups. Between 1999 and 2012, the median ratio increased for all age groups—particularly among those aged 35 to 44, whose debt-to-income ratio increased from 1.15 in 1999 to 1.93 in 2012. The median ratio also increased among families in the 65-and-over group, from 0.24 in 1999 to 0.42 in 2012.

Families whose major income earner was aged 35 to 44 also had the distinction of being the only age category for which the median debt-to-asset ratio rose over the period, from 0.31 to 0.39. This supports our earlier findings, which showed a relatively rapid rise in median debt levels compared with median assets among families in this age group. Other age groups had similar debt-to-asset ratios in both 1999 and 2012, with younger families having higher ratios and older families having lower ratios.

Between 1999 and 2012, the debt-to-income ratio increased significantly among families whose major income earner had a college/trades diploma or a university degree. However, the debt-to-asset ratio remained stable over the period in all educational categories.

Significant increases in the debt-to-income ratio also took place among couple families with children (from 1.24 to 1.94), and couple families without children (from 0.79 to 1.20). In contrast, changes in the debt-to-asset ratio were not significant across family structures.

The increases in the debt-to-income ratios were statistically significant among families of immigrants who have been in Canada for at least 10 years and among the Canadian-born. Conversely, the debt-to-asset ratios remained stable over the period for the two types of immigrant families and for the Canadian-born.

Homeownership was associated with significant increases in the debt-to-income ratio—especially among mortgagees, for whom the median debt-to-income ratio rose from 1.72 in 1999 to 2.46 in 2012. The debt-to-asset ratio of mortgagees, however, remained stable over the period (at 0.35).

Regionally, the largest increases in the debt-to-income ratio took place in Alberta and British Columbia, widening the gap with the other provinces. On the other side of the country, the Atlantic also registered a smaller, yet significant, increase over the period. Changes in the median debt-to-income ratio were not significant in the other three regions.

Lastly, median debt-to-asset ratios remained stable in all regions except Quebec, where the median ratio declined from 0.24 in 1999 to 0.19 in 2012. Such results are in line with our earlier findings, which indicated that median assets increased significantly in Quebec, while median debt did not do so.

Table 4
Median debt-to-income ratio and debt-to-asset ratio across family characteristics, families with debt, 1999 and 2012

	1999	2012	1999	2012
	Median debt-to-income ratio		Median debt-to-asset ratio	
All	**0.78**	**1.10***	**0.27**	**0.25**
Age of major income earner				
15 to 34	0.83	1.28*	0.52	0.53
35 to 44	1.15	1.93*	0.31	0.39*
45 to 54	0.75	1.16*	0.18	0.20
55 to 64	0.48	0.84*	0.08	0.11
65 and over	0.24	0.42*	0.05	0.05
Education of major income earner				
Less than high school	0.44	0.50	0.22	0.20
High school	0.83	0.94	0.29	0.26
College/trades	0.93	1.26*	0.30	0.28
University degree	0.96	1.43*	0.24	0.23
Family structure				
Non-seniors (under age 65)				
Singles	0.55	0.82	0.40	0.40
Couples without children or with children 18 and over	0.79	1.20*	0.20	0.19
Couples with children under 18	1.24	1.94*	0.33	0.34
Lone parents	0.62	0.62	0.42	0.37
Others	0.48	0.65	0.17	0.21
Seniors (65 and over)	0.24	0.42*	0.05	0.05
Immigrant status of major income earner				
Immigrated within the last 10 years	0.89	1.66	0.52	0.45
More than 10 years since immigration	0.88	1.37*	0.25	0.26
Canadian-born	0.76	1.03*	0.26	0.24
Region				
Atlantic	0.56	0.87*	0.20	0.22
Quebec	0.66	0.75	0.24	0.19*
Ontario	0.92	1.18	0.29	0.27
Manitoba and Saskatchewan	0.72	0.99	0.22	0.23
Alberta	0.92	1.60*	0.31	0.31
British Columbia	0.98	1.43*	0.31	0.27
Homeownership status				
Owners with a mortgage	1.72	2.46*	0.35	0.35
Owners without a mortgage	0.25	0.38*	0.03	0.03
Non-owners	0.27	0.31	0.34	0.37
Income quintile				
Bottom quintile	0.62	0.76	0.45	0.40
Second quintile	0.64	0.79	0.28	0.28
Middle quintile	0.88	1.36*	0.28	0.27
Fourth quintile	0.91	1.34*	0.24	0.21
Top quintile	0.87	1.24*	0.18	0.16

* indicates that the 2012 value was significantly different from the 1999 value at the 5% level of significance
Source: Statistics Canada, Survey of Financial Security, 1999 and 2012.

More than one-third of Canadian families had a debt-to-income ratio above 2.0 in 2012

Since there are considerable variations between Canadian families in their household finances, examining changes in the distribution of both ratios can provide additional insight.

In 2012, for instance, about one-third of Canadian families had a debt-to-income ratio up to 0.5, meaning the total value of their debt did not exceed 50% of their overall after-tax family income (Chart 2). These families may be less at risk of a financial shock, since they have a lower degree of debt exposure.

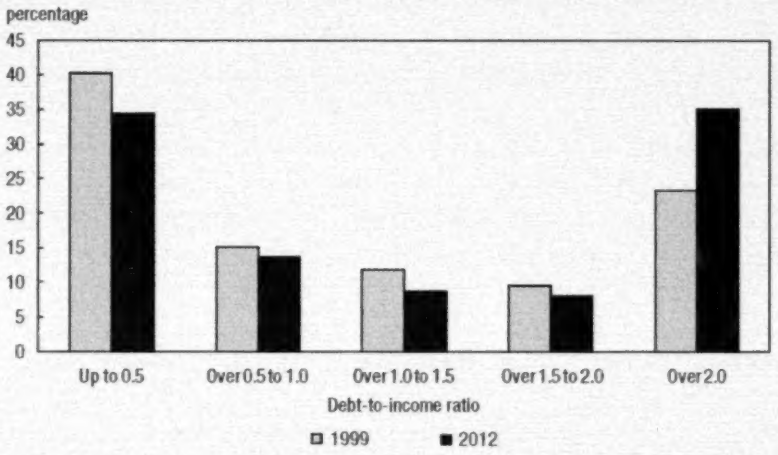
However, another one-third (35%) of Canadian families had a debt-to-income ratio above 2.0 in 2012. In comparison, the proportion of families in such a situation was 23% in 1999. In fact, the families-with-a-ratio-above-2.0 category was the only one to increase over the period—the proportion declined in all other categories with lower ratios.

In addition, 14% of Canadian families had consumer debt that was higher than their after-tax family income in 2012, up from 8% in 1999. Consumer debt can be described as the total amount of debt that is not mortgage debt—debt outstanding on credit cards, personal and home equity lines of credit, secured and unsecured loans from banks and other institutions including vehicle loans, and other unpaid bills. Meeting financial obligations could be a challenge for these families—some of them potentially dedicate a large portion of their income to servicing a debt that does not contribute to building housing equity.

The proportion of Canadian families with consumer debt larger than after-tax family income was somewhat larger in certain family categories, such as single people (21%) and British Columbia residents (20%). However, the increase in the ratio over the period is not because of a particular increase in the share of families that were more at risk of having a larger ratio. Rather, the ratio increased in almost all family categories over the period.

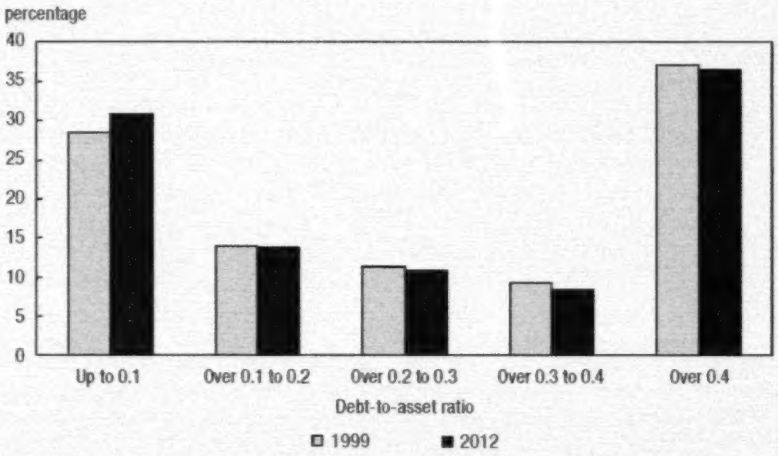
In comparison, the distribution of the debt-to-asset ratio remained relatively stable over the period (Chart 3). In 2012, 31% of Canadian families had a debt-to-asset ratio that was equal to or lower than 0.1 (families with debt levels that were 10% of the value of their assets). Conversely, 37% of Canadian families had a debt-to-asset ratio of above 0.4 in 2012. These percentages were relatively similar in 1999.

Chart 2
Distribution of Canadian families by level of debt-to-income ratio, families with debt, 1999 and 2012



Source: Statistics Canada, Survey of Financial Security, 1999 and 2012.

Chart 3
Distribution of Canadian families by level of debt-to-asset ratio, families with debt, 1999 and 2012



Source: Statistics Canada, Survey of Financial Security, 1999 and 2012.

Conclusion

The period from 1999 to 2012 was characterized by significant increases in both assets and debts for nearly all types of families in the country. The magnitude of these changes, however, was not the same from one type of family to another. Debt, in particular, increased faster among families that were at the beginning of their life cycle, such as families in the 35-to-44 age group and couples with children. These families also benefited from increases in assets, but other types of families also benefited in this regard—particularly those in the later stages of their life cycle. For instance, median assets rose by $252,700 among those aged 55 to 64 over the period, compared with $179,800 among those aged 35 to 44.

Another perspective on family finances can be obtained by examining indebtedness ratios. In this paper, two particular ratios are examined: the debt-to-income ratio and the debt-to-asset ratio. Between 1999 and 2012, the median debt-to-income ratio of Canadian families increased from 0.78 to 1.10, while the median debt-to-asset ratio remained relatively stable (around 0.25). The debt-to-income ratio increased faster for some types of families than others. This was the case among families whose major income earner was aged 35 to 44 and couple families with children under 18. Families in the 35-to-44 age group were the only group for whom median debt-to-assets increased over the period, from 0.31 to 0.39.

Because some families have very low ratios and others have higher ratios, it is also important to examine the distribution of families across categories of debt-to-income and debt-to-asset ratios. In 2012, more than one-third of all Canadian families (about 35%) had a debt-to-income ratio above 2.0 (or at least 200% of their income), up from 23% in 2012. Conversely, 34% had a debt-to-income ratio up to 0.5, down from 40% in 1999. In contrast, the distribution of families across debt-to-asset ratios remained largely unchanged between 1999 and 2012.

Sharanjit Uppal *is a senior analyst with the Labour Statistics Division and* ***Sébastien LaRochelle-Côté*** *is Editor-in-Chief of Insights on Canadian Society at Statistics Canada.*

Data sources, methods and definitions

Data sources

Data from the 1999 and 2012 Survey of Financial Security (SFS) were used in this study. The SFS is a voluntary survey that collects information from a sample of Canadian families on their assets, debts, employment, income and education. Information is collected on the value of all major financial and non-financial assets and on the money owing on mortgages, vehicles, credit cards, student loans and other debts.

The SFS covers the population living in the 10 provinces. Excluded from the survey coverage are persons living on reserves and in other Aboriginal settlements in the provinces; official representatives of foreign countries living in Canada and their families; members of religious and other communal colonies; members of the Canadian Forces living on military bases or in military camps; and persons living full-time in institutions, for example, inmates of penal institutions and chronic care patients living in hospitals and nursing homes.

The analysis in this study is restricted to families with some level of debt. Individual characteristics such as age and education reflect those of the major income earner of the family.

Definitions

Family refers to the economic family, defined as families of two or more people living in the same dwelling, related by blood, marriage, or adoption, or who are living common-law, and single people (unattached individuals) who are living either alone or with others to whom they are unrelated.

Total debt pertains to total family debt and includes mortgage debt on the principal residence and all other real estate (Canadian and foreign), and consumer debt.

Consumer debt includes debt outstanding on credit cards, personal and home equity lines of credit, secured and unsecured loans from banks and other institutions including vehicle loans, and other unpaid bills.

Total assets pertain to total family assets and include real estate (principal residence and all other real estate), employer pension plans (on a termination basis) and all other assets (including RRSPs, RESPs, RRIFs, stocks, bonds, mutual funds, vehicles, household possessions, bank accounts, collectibles, accumulated value of family businesses, and other financial and non-financial assets).

Income quintiles are based on the total income of the economic family adjusted for family size (i.e., divided by the square root of the family size).

Debt-to-income ratio is obtained by dividing total family debt by the after-tax income of the family.

Debt-to-asset ratio is obtained by dividing total family debt by total family assets.

Decomposition of changes in debt and assets across family characteristics

What were the driving factors behind the differing increases in debt and assets for various groups? One way to answer this question is to examine the portion of the asset and debt increase that is related to housing—mortgage (debt) and real estate (assets). The decompositions are based on changes in average values for each family category.

Between 1999 and 2012, average debt rose by $57,600, while average assets rose by $300,700 (Table A.1). Because average values can be influenced by extreme values at the top of the distribution, changes in the average are typically larger than changes in the median.

Of the total increase in average total debt, more than three-quarters was due to an increase in mortgage debt. The contribution of mortgage debt to the increase in total debt was higher for the younger age groups. For example, mortgage debt was responsible for 85% of the growth in total debt for those aged 15 to 44. In comparison, the contribution was 47% for those aged 65 and over. This is because many in the younger group were most likely first-time home buyers in the 2000s, a period that corresponded with rising housing prices.

There was not much variation across income quintiles in the proportion of the increase in mortgage-related debt. For all quintiles, the contribution of mortgage debt to the increase in average debt varied between 73% and 80%. Regionally, the contribution of mortgage debt to the overall debt increase varied from 71% in Quebec to 81% in Manitoba and Saskatchewan.

Other groups in which mortgage debt played a larger role in the overall debt increase included recent immigrants (94%), singles (84%), couples with children (82%) and those with a university degree (82%).

Decomposition of changes in debt and assets across family characteristics (concluded)

Table A.1
Decomposition of changes in average debt and assets across family characteristics, families with debt, 1999 to 2012

	Change in average debt			Change in average assets			
		percentage due to			percentage due to		
	Total (in dollars)	Mortgage	Consumer	Total (in dollars)	Real estate	Pension	Other
All	**57,600**	**76.7**	**23.4**	**300,700**	**53.0**	**24.8**	**22.2**
Age of major income earner							
15 to 34	51,400	84.8	15.4	123,400	67.1	14.4	18.5
35 to 44	106,400	85.2	14.7	263,700	76.3	15.5	8.3
45 to 54	54,900	74.5	25.3	322,000	54.6	27.0	18.5
55 to 64	47,300	62.2	37.8	344,500	42.1	28.3	29.6
65 and above	29,900	46.8	53.2	360,900	47.5	17.9	34.6
Education of major income earner							
Less than high school	23,500	48.5	51.5	132,500	60.4	18.9	20.8
High school	39,700	69.8	30.2	254,800	49.1	25.8	25.1
College/trades	55,700	77.6	22.4	269,900	52.0	26.3	21.7
University degree	78,000	81.8	18.2	396,400	56.9	24.9	18.1
Family structure							
Non-seniors (under age 65)							
Singles	37,900	84.2	15.8	136,200	62.9	26.4	10.6
Couples without children or with children 18 and over	60,900	72.6	27.6	403,900	41.7	27.7	30.7
Couples with children under 18	107,100	81.8	18.2	354,500	66.5	18.9	14.6
Lone parents	41,000	81.2	18.8	152,200	61.0	32.0	7.0
Others	41,900	76.8	23.2	221,800	62.4	23.3	14.3
Seniors (65 and over)	29,900	46.8	53.2	360,900	47.5	17.9	34.6
Immigrant status of major income earner							
Immigrated within the last 10 years	68,300	93.7	6.3	233,400	88.4	3.1	8.5
More than 10 years since immigration	71,000	71.8	28.2	304,900	64.3	15.9	19.9
Canadian-born	53,600	75.9	24.1	303,100	48.4	27.9	23.6
Region							
Atlantic	40,700	76.9	23.1	191,100	42.5	40.6	17.0
Quebec	42,500	71.1	28.7	281,900	40.0	27.0	33.0
Ontario	52,800	77.7	22.3	285,100	55.4	26.0	18.5
Manitoba and Saskatchewan	55,200	81.3	19.0	314,800	42.6	32.9	24.5
Alberta	92,600	74.5	25.5	309,100	68.8	18.3	12.9
British Columbia	80,000	79.9	20.0	424,400	61.4	17.4	21.2
Homeownership status							
Owner with a mortgage	97,800	85.9	14.0	327,200	64.4	22.2	13.4
Owner without a mortgage	38,300	30.5	70.0	546,483	42.8	26.6	30.5
Non-owners	8,000	57.5	43.8	39,600	21.5	50.3	28.0
Income quintile							
Bottom quintile	24,700	74.5	25.5	74,300	80.9	7.1	11.8
Second quintile	35,600	75.3	25.0	162,100	66.1	15.1	18.9
Middle quintile	57,700	72.8	27.4	263,200	56.8	17.4	25.8
Fourth quintile	70,100	80.2	19.8	338,100	52.9	30.1	17.0
Top quintile	100,200	77.2	22.8	667,400	45.1	29.3	25.5

Source: Statistics Canada, Survey of Financial Security, 1999 to 2012.

With regard to assets, real estate contributed to more than one-half of the overall increase in the average value. The value of employer pension plans contributed an additional 25%. The remainder of the increase was due to all other assets (financial investments such as RRSPs, and other non-housing items like cars). Real estate contributed to more than three-fourths of the increase in the value of assets among those aged 35 to 44 and 67% among those aged 15 to 34. The contribution of real estate was lower for older age groups.

Differences across income quintiles were larger for assets. Specifically, real estate contributed more to the increase in overall assets among those in the bottom than among those at the top of the income distribution. Among those in the bottom quintile, average total assets increased by $74,300. More than four-fifths (81%) of that increase could be attributed to real estate. In comparison, average assets increased by $667,400 in the top quintile, and less than one-half (45%) of that increase was due to real estate.

Regionally, real estate contributed a larger proportion of the increase in the value of assets for those in Alberta (69%) and British Columbia (61%). The contribution of real estate was lowest in Quebec (40%).

Notably, real estate contributed to 88% of the increase in the value of assets of recent immigrants.

Notes

1. See Japelli and Modigliani (2005).
2. See Messacar and Morissette (2015).
3. See Lafrance and LaRochelle-Côté (2012).
4. The System of National Accounts releases information about aggregate household finances on a regular basis. See CANSIM table 378-0123.
5. See Chawla and Uppal (2012). In this study, data from the Canadian Financial Capability Survey were used to examine average debt across various categories of families, but sampling issues prevented an examination of assets. For another study containing a profile of debt among Canadian families, see Crawford and Faruqui (2012).
6. The existing studies by Brighton and Connidis (1982), Morissette et al. (2002), Morissette and Zhang (2006), Hurst (2011) and Chawla and Uppal (2012) have used data prior to the 2008 liquidity crisis. In addition, the focus of most of these studies was solely on debt.
7. In the SFS, the unit of analysis is the economic family; however, personal characteristics such as age and education are based on the major income earner.
8. In this analysis, families with children are defined as couples with children under the age of 18.
9. Family income levels have been adjusted for family size by dividing by the square root of family size to take the lower relative needs of additional family members compared to a single person living alone into account.
10. See Modigliani and Brumberg (1954) and Friedman (1957).
11. See Marshall (2011) for more information about debt among retirees and near-retirees. A good deal of the rising proportion of those with debt at this age was due to an increase in the proportion of those who are using a home equity line of credit.
12. The corresponding increase in average debt was from $71,400 to $129,000, and in average assets it was from $355,900 to $656,600. Part of these changes can be attributed to population aging, given that older age groups are likely to have lower debt and higher assets than younger groups. The age-adjusted average debt for 2012 was $138,000 and age-adjusted average assets were $606,000.
13. Examples of "other" family structures include co-resident siblings or nieces and nephews living with aunts and/or uncles.
14. Although the debt–service ratio—debt payments divided by disposable income—is a more direct measure of debt burden, a comprehensive ratio cannot be calculated using data from the Survey of Financial Security.
15. The Survey of Financial Security estimates for the debt-to-asset and debt-to-income aggregate ratios have always been higher than estimates from the System of National Accounts. One explanation is that individuals report outstanding debt on credit items such as credit cards and unpaid bills at the time of the survey, which often get paid by the end of the month and are therefore not reported as outstanding household debt by financial institutions in the System of National Accounts.
16. For instance, when the aggregate method is used, Canadian families had a debt-to-asset ratio of 0.20 in 2012. However, the median debt-to-asset ratio was 0.25 in 2012, indicating that the debt for the median Canadian family was 25% of their assets. The difference was larger in the case of income—aggregate values indicated that total debt amounted to 189% of the overall income of Canadian families in 2012; however, for a typical family, the median debt-to-income was lower (110%). These differences are not unusual—they simply reflect the fact that overall values must include all debt, income and asset values of Canadian families, including the most extreme ones.
17. When mortgage debt and real estate assets are excluded from the calculations, the median debt-to-income ratio increased from 0.18 to 0.25 over the period, while the median debt-to-asset ratio remained unchanged at 0.11. Furthermore, both families with and without pension assets saw an increase in their debt-to-income ratio, albeit the ratio increased faster in the case of families without pension assets (from 0.67 to 1.02, compared with a 0.87 to 1.16 increase among those with pension assets). In both cases, the debt-to-asset ratio remained stable over the period.

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Appendix

Table A.2
Aggregate debt-to-income ratio and debt-to-asset ratio across family characteristics, families with debt, 1999 and 2012

	1999	2012	1999	2012
	Debt-to-income ratios		Debt-to-asset ratios	
All	**1.28**	**1.89***	**0.20**	**0.20**
Age of major income earner				
15 to 34	1.41	2.16*	0.37	0.39
35 to 44	1.39	2.52*	0.25	0.32*
45 to 54	1.22	1.66*	0.17	0.17
55 to 64	1.06	1.48*	0.10	0.12
65 and over	0.77	1.18	0.07	0.08
Education of major income earner				
Less than high school	1.06	1.48*	0.18	0.18
High school	1.29	1.79*	0.22	0.19*
College/trades	1.32	1.95*	0.23	0.22
University degree	1.33	1.98*	0.18	0.18
Family structure				
Non-seniors (under age 65)				
Singles	1.27	2.24*	0.25	0.26
Couples without children or with children 18 and over	1.19	1.66*	0.17	0.16
Couples with children under 18	1.42	2.30*	0.24	0.27*
Lone parents	1.79	1.95	0.30	0.29
Others	0.99	1.34*	0.17	0.18
Seniors (65 and over)	0.77	1.18	0.07	0.08
Immigrant status of major income earner				
Immigrated within the last 10 years	1.77	2.66*	0.38	0.34
More than 10 years since immigration	1.48	2.31*	0.20	0.21
Canadian-born	1.21	1.76*	0.19	0.19
Region				
Atlantic	0.88	1.41*	0.17	0.19*
Quebec	1.10	1.62*	0.18	0.17
Ontario	1.34	1.86*	0.21	0.20
Manitoba and Saskatchewan	0.94	1.58*	0.16	0.17
Alberta	1.27	2.08*	0.19	0.24*
British Columbia	1.74	2.63*	0.23	0.21
Homeownership status				
Owners with a mortgage	1.84	2.72*	0.28	0.29
Owners without a mortgage	0.58	0.91*	0.06	0.06
Non-owners	0.46	0.64*	0.21	0.21
Income quintile				
Bottom quintile	1.88	2.89*	0.26	0.29
Second quintile	1.42	2.05*	0.24	0.23
Middle quintile	1.45	2.16*	0.24	0.23
Fourth quintile	1.25	1.90*	0.21	0.21
Top quintile	1.07	1.56*	0.16	0.15

* indicates that the 2012 value was significantly different from the 1999 value at the 5% level of significance

Source: Statistics Canada, Survey of Financial Security, 1999 and 2012.